

WE CLAIM:

1. Method for choosing a network element of a mobile telecommunication network from a plurality of network elements in order to provide a predetermined service, comprising the steps:

choosing a server pool, the server pool being composed of the plurality of network elements, all of which provide the same predetermined service,

defining a pool handle, wherein a pool handle is a name which identifies the server pool, and

providing a name server for handling requests from a pool user to the server pool, wherein the name server identifies a request to the server pool by means of the pool handle and selects according to predetermined criteria the network elements for providing the predetermined service.

2. Method according to claim 1, wherein the plurality of network elements are radio network controllers according to the UMTS standard, the request to be handled is a paging request from a core network element acting as a pool user, where the core network element is one of a mobile services switching center (~~MSC~~) and a serving GPRS support node, and the service to be provided is transmitting a paging message to a predetermined user equipment.

3. Method according to claim 2, wherein the name server identifies the predetermined user equipment by an user equipment identification, with the user equipment identification is one of a temporary identity of the user equipment and a

subscriber identity stored on a subscriber identity module associated with the user equipment.

4. Method according to claim 2, wherein the name server accesses a location area or a routing area, which indicate the area in which the user equipment is currently located, and selects a radio controller which is close enough to the user equipment for transmitting a paging message to predetermined user equipment.

5. Method according to claim 2, wherein the name server checks whether the predetermined user equipment is assigned to a particular radio controller and selects the particular radio controller for paging.

6. Method according to claim 2, wherein the name server selects according to a predetermined algorithm one radio controller from the radio controllers, which are capable of transmitting a paging message to predetermined user equipment.

7. Method according to claim 6, wherein the one radio controller is selected using an algorithm for balancing loads of the radio controllers.

8. Method according to claim 6, wherein the name server creates a ranking list of the radio controllers capable of transmitting a paging message to the predetermined user equipment, wherein a first radio controller in the list is a most

favorable to perform paging and a last radio controller in the list is a least favorable to perform paging.

9. Method according to claim 8, wherein an identity of the selected radio controller or the ranking list of the radio controllers is sent to the core network elements acting as the pool user.

10. Method according to claim 2, wherein the radio controller sends information to the name server containing an identification of the selected radio controller and of the predetermined user equipment after having performed paging to the predetermined user equipment.

11. Method according to claim 2, wherein the name server stores a mapping between the predetermined user equipment and the selected radio controllers.

12. Method according to claim 11, wherein the name server stores a mapping between the predetermined user equipment and the selected radio controller for both a circuit switched domain and a packet switched domain of the mobile telecommunication network.

13. Method according to claim 11, wherein the mapping between the predetermined user equipment and the selected radio controllers is updated once a

connection between the predetermined user equipment and the selected radio controller is terminated.

14. Method according to claim 1, wherein the plurality of network elements are a plurality of gateway servers of an Internet Protocol based radio access network, wherein the Internet Protocol based radio access network is one of radio access network gateways and circuit switched gateways, and the pool user is a Radio access network access server.

15. Method according to claim 1, wherein the plurality of network elements are network servers serving GPRS support nodes or gateway GPRS support nodes.

16. Mobile telecommunication network comprising

- a server pool having a plurality of network elements, all of which provide a same predetermined service,
- a pool handle, wherein a pool handle is a name, which identifies the server pool, and
- a name server for handling requests from a pool user to the server pool, wherein the name server is adapted to identify a request to the server pool by means of the pool handle and selecting according to predetermined criteria the network elements for providing the predetermined service.

17. Mobile telecommunication network according to claim 16, wherein the plurality of network elements are radio network controllers according to the UMTS standard, the request to be handled is a paging request from a core network element acting as a pool user, wherein the core network element is one of a mobile services switching center and a serving GPRS support node, and the service to be provided is transmitting a paging message to a predetermined user equipment.

18. Mobile telecommunication network according to claim 17, wherein the name server is adapted to identify the predetermined user equipment by an user equipment identification, wherein the user equipment identification is one of a temporary identity of the user equipment and a subscriber identity stored on a subscriber identity module associated with the user equipment.

19. Mobile telecommunication network according to claim 17, wherein the name server is adapted to access a location area or a routing area, which indicate the area in which the user equipment is currently located, and selecting a radio controller which is close enough to the user equipment for transmitting a paging message to the predetermined user equipment.

20. Mobile telecommunication network according to claim 17, wherein the name server is adapted to check, whether the predetermined user equipment is assigned to a particular radio controller, and select the particular radio controller for paging

21. Mobile telecommunication network according to claim 17, wherein the name server is adapted to select according to a predetermined algorithm one radio controller from the radio controllers, which are capable of transmitting a paging message to the predetermined user equipment.

22. Mobile telecommunication network according to claim 21, wherein the name server is adapted to select the one radio controller using an algorithm for balancing loads of the radio controllers.

23. Mobile telecommunication network according to claim 21, wherein the name server is adapted to create a ranking list of the radio controllers capable of transmitting a paging message to the predetermined user equipment, wherein a first radio controller in the list is a most favorable to perform paging and a last radio controller in the list is a least favorable to perform paging.

24. Mobile telecommunication network according to claim 23, wherein the name server is adapted to send the identity of the one radio controller or the ranking list of the radio controllers to the pool user.

25. Mobile telecommunication network according to claim 16, wherein the radio controller is adapted to send information to the name server containing an

identification of the selected radio controller and of the predetermined user equipment after having performed paging to the predetermined user equipment.

26. Mobile telecommunication network according to claim 16, wherein the name server comprises a register for storing a mapping between the predetermined user equipment and the selected radio controllers.

27. Mobile telecommunication network according to claim 16, wherein the name server has access to a register for mapping between the predetermined user equipment and the selected radio controller for both a circuit switched domain and a packet switched domain of the mobile telecommunication network.

28. Mobile telecommunication network according to claim 16, wherein the selected radio controller is adapted to indicate to the name server that a connection between the predetermined user equipment and the selected radio controller is terminated and the name server is adapted to change the mapping between the predetermined user equipment and the selected radio controllers in response to the indication from the selected radio controller.

29. Mobile telecommunication network according to claim 16, wherein the plurality of network elements are a plurality of gateway servers of an Internet Protocol based radio access network, wherein the Internet Protocol based radio access network

is one of radio access network gateways and a circuit switched gateways, the pool user is a Radio access network access server.

30. Mobile telecommunication network according to claim 16, wherein the plurality of network elements are network servers serving GPRS support nodes or gateway GPRS support nodes.

31. Mobile telecommunication network according to claim 16, wherein the name server constitutes a core network node such as an serving GPRS support node, a Home location register or a Mobile Services Switching Center.

32. A Mobile telecommunication network allowing choice of a network element from a plurality of network elements in order to provide a predetermined service, comprising:

choosing means for choosing a server pool, the server pool being composed of the plurality of network elements, all of which provide the same predetermined service,

defining means for defining a pool handle, wherein a pool handle is a name which identifies the server pool, and

name serving means for serving handling requests from a pool user to the server pool, wherein the name serving means identifies a request to the server pool by means of the pool handle and selects according to predetermined criteria the network elements for providing the predetermined service.

33. A Mobile telecommunication network according to claim 32, wherein the plurality of network elements are radio network controllers according to the UMTS standard, the request to be handled is a paging request from a core network element acting as a pool user, where the core network element is one of a mobile services switching center and a serving GPRS support node, and the service to be provided is transmitting a paging message to a predetermined user equipment.

34. A Mobile telecommunication network according to claim 33, wherein the name serving means identifies the predetermined user equipment by an user equipment identification, with the user equipment identification is one of a temporary identity of the user equipment and a subscriber identity stored on a subscriber identity module associated with the user equipment.

35. A Mobile telecommunication network according to claim 33, wherein the name serving means comprises accessing means for accessing a location area or a routing area, which indicate the area in which the user equipment is currently located, and selecting means for selecting a radio controller which is close enough to the user equipment for transmitting a paging message to predetermined user equipment.

36. Method according to claim 33, wherein the name serving means comprises checking means for checking whether the predetermined user equipment is

assigned to a particular radio controller and selecting means for selecting the particular radio controller for paging.

37. Method according to claim 33, wherein the name serving means comprises selecting means for selecting according to a predetermined algorithm one radio controller from the radio controllers, which are capable of transmitting a paging message to predetermined user equipment.

38. Method according to claim 37, wherein the one radio controller is selected using an algorithm for balancing loads of the radio controllers.

39. Method according to claim 37, wherein the name serving means comprises creating means for creating a ranking list of the radio controllers capable of transmitting a paging message to the predetermined user equipment, wherein a first radio controller in the list is a most favorable to perform paging and a last radio controller in the list is a least favorable to perform paging.

40. Method according to claim 39, wherein an identity of the selected radio controller or the ranking list of the radio controllers is sent to the core network elements acting as the pool user.

41. Method according to claim 33, wherein the radio controller sends information to the name serving means containing an identification of the selected

radio controller and of the predetermined user equipment after having performed paging to the predetermined user equipment.

42. Method according to claim 33, wherein the name serving means comprises storing means for storing a mapping between the predetermined user equipment and the selected radio controllers.

43. Method according to claim 42, wherein the name serving means comprises storing means for storing a mapping between the predetermined user equipment and the selected radio controller for both a circuit switched domain and a packet switched domain of the mobile telecommunication network.

44. Method according to claim 42, wherein the mapping between the predetermined user equipment and the selected radio controllers is updated once a connection between the predetermined user equipment and the selected radio controller is terminated.

45. Method according to claim 32, wherein the plurality of network elements are a plurality of gateway servers of an Internet Protocol based radio access network, wherein the Internet Protocol based radio access network is one of radio access network gateways and circuit switched gateways, and the pool user is a Radio access network access server.

46. Method according to claim 32, wherein the plurality of network elements are network servers serving GPRS support nodes or gateway GPRS support nodes.